

May 8, 2013

**Hampton Roads Transit Comments on PPEA Proposal for the Extension of Light Rail from  
Newtown Road to the Vicinity of Rosemont Road**

**Skanska/AECOM/Shucet/Jacobs Proposal**

**Background**

An unsolicited submittal was provided to the City of Virginia Beach on April 5, 2013 for the purpose of constructing and maintaining The Tide extension to the vicinity of Rosemont Road. The following notes are provided as Hampton Roads Transit's initial review of the proposal and contain comments that are grouped by areas of concern. For convenience, the Skanska-AECOM-Shucet group will be herein referred to as the Proposer, and the submitted document as the Proposal.

**Summary**

The PPEA proposal for the Tide light rail extension from Newtown to area of Rosemont Road contains some attractive elements, particularly those related to initial capital cost. However, this is a high level document that contains as many questions as answers. Much of the report tends to lean on the qualifications of the Project team rather than provide any real guidance regarding the construction and financing of this work.

One concern regarding the qualifications of key personnel is that the management personnel, outside of Mr. Shucet, are assigned to very different roles than they had for the Norfolk LRT work. This may not translate into equally successful results.

[REDACTED]

Proposal appears to cover only the design and construction elements of the work, while excluding major elements such as utility accommodation or relocation. [REDACTED]

[REDACTED]

[REDACTED] Also, the issues associated with major capital replacements of LRT infrastructure are not addressed at all. These costs can be significant over time. Comment number 36 (Page 46) addresses some key areas related to the potential of future funding by FTA for capital and operating assistance. This section should be reviewed carefully.

Finally, it is important to note that the Proposal is silent regarding any requirements that may be necessary for Federal funding by FTA under the New Starts program.

## **Detailed Review Comments**

1. **April 1, 2013 Letter, City of Virginia Beach:** This will be provided under PPEA guidelines rather than PPTA. This is feasible, as long as the Proposer does not intend to take on the operation of the LRT system. The proposal to take on the maintenance function of the LRT after construction would presumably come out of funding external to PPEA Guidelines. The Proposal was careful to separate the maintenance company entity from the project construction. It should be noted that a decision to grant a LRT maintenance concession would have to be made by the Transportation District Commission of Hampton Roads (TDCHR) along with the concurrence of the Federal Transit Administration (FTA).
2. **March 28, 2013 Letter, Kaufman & Canoles:** The maintenance aspect of the Proposal will need to be defined in detail in any maintenance agreement, particularly with respect to facility warranty coordination, such as it may be, and ongoing coordination with HRT Operations.
3. **Page ii, Last Para.:** This essentially provides guaranteed annual funding to the Proposer, with HRT and the city of Virginia Beach continuing to operate under a farebox/subsidy arrangement as defined in the Cost Allocation Agreement. The funding risk is thus with HRT and the City of Virginia Beach, as they assume the largest variable cost factors.
4. **Page v, 2<sup>nd</sup> Para.:** It should be noted that the proposer's experience with Public-Private Partnerships is exclusively in for-profit toll roads. The LRT extension would appear to require a different skill set. Efficiency would be more important than raw technical ability in this case.
5. **Page v, 3<sup>rd</sup> Para.:** The companies involved in the original Norfolk LRT project also claimed long experience in transit infrastructure design and construction. Given the numerous challenges of the Norfolk project, very little of that expertise translated locally to the Tide project work.
6. **Page v, Last Para.:** Jacobs as lead designer would appear to be a questionable choice, as they have all of the disadvantages of the previous PB-URS design with even less local presence. Jacobs' local office is dedicated to military work at Oceana. It is understood that the risk for this selection is undertaken by the Proposer and not the City, but it is worth noting. Design for many components of this work (e.g., sitework, park & rides) cannot be performed at remote locations. Jacobs had difficulty supplying local personnel for its relatively small portion of the construction management for the Norfolk Tide project; and we believe that it would struggle for a large design effort.
7. **Page vii:** The \$45MM/mile figure appears reasonable for what is proposed. The HRT VBTES Study is preliminary and included a 6% annual cost inflator from 2010 to 2018. That alone would account for the 44% cost differential. The Proposer also correctly assumes that it would avoid the massive (30%) soft costs associated with the Norfolk LRT, as ROW, NEPA, and FTA funding issues would be presumably off the table for their work.
8. **Page viii:** The schedule assumes that the scope agreements and preliminary plans could be completed in 9 months with final design deferred to the end of 2014. This schedule contains an unstated assumption that the City of Virginia Beach will expedite its internal design review, and that private utility issues can be resolved quickly. Also, pre-revenue transfer of the project to HRT Operations is noted, but not discussed in any detail.
9. **Page 3, Maintenance Contractor:** The fixed price, indexed, contract is a concern. If maintenance concession is for 27 years, the bridge deck, vehicles, track, and fixed facilities will be at the end of their useful service lives. Who will be responsible for capital replacement under this arrangement? Is the indexing inclusive of other LRT extensions?

10. **Page 3, Rolling Stock/Maintenance Contractor:** The Proposer should consider competitively procuring Design Services as well. If the Proposer is looking for a fixed price annual contract, a favorable price for rolling stock and maintenance benefits the Proposer, not the City of Virginia Beach.
11. **Page 6, 1<sup>st</sup> Para.:** Although the Proposer includes environmental assessment in its work plan, it notes that HRT is responsible for NEPA provisions. This presumes that HRT will deliver a completed Final Environmental Impact Statement and seek from FTA the issuance of the environmental Record of Decision (ROD). We question whether any construction activity can begin prior to the receipt of the ROD. HRT expects to receive a ROD in mid 2015.
12. **Page 7, Last Para.:** If the City does not pursue the project as a PPP and reimburses development funding, is Skanska precluded from bidding in any follow-on projects?
13. **Page 10, 2<sup>nd</sup> Para.:** If the maintenance concession is not awarded, will there be a warranty by the Design/Build Contractor associated with its work?
14. **Page 11, Last Para.:** Skanska qualifications contain several references to the ERC Tunnel Project, which has not started construction.
15. **Page 13, 1<sup>st</sup> Para.:** Judging from a small sample of Jacobs' local work, their selection for primary design services is a concern. If they decide to take on work in several remote offices, and this is a definite possibility, the effort will encounter the same difficulties as the design for Norfolk LRT. This was identified as a Tide project deficiency by FTA. A preliminary concern is that Jacobs' selection may have been based on its employment of a few key personnel rather than its overall technical ability to deliver an acceptable design in this region. Further clarification is needed.
16. **Page 13, 3<sup>rd</sup> Para.:** Commissioning of vehicles is not covered. Who is responsible for vehicle testing and acceptance?
17. **Page 14, AECOM:** How does the warranty phase factor in a DBM/PPP?
18. **Page 19, P. Moore:** While Mr. Moore is a known quantity for civil construction, his capabilities are unknown for the multi-disciplinary Design-Build aspects of the work.
19. **Page 19, H. Nutbrown:** While Mr. Nutbrown has known abilities as a Project Director or DeputyPD/DeputyPM, his capability as Design Manager are less familiar.
20. **Page 23, 3<sup>rd</sup> Para.:** Contract consolidation was for two contracts by the same contractor (Skanska) as part of a global settlement. We believe the characterization of Jacobs' role in final construction of Norfolk LRT may be overstated.
21. **Page 23, Last Item:** HRT is very aware of the safety enhancements. VDRPT proposed them and HRT prepared the scopes before any of the Proposer's project team was involved. Truland utilized B&C Transit to perform the design work for the Tide for these items. Is this proposed in the future, or is Jacobs going to attempt the design out of its systems design group HQ in Philadelphia, essentially re-engineering the existing signal and communications work?
22. **Page 25, Skanska, Hudson Bergen LRT: It should be noted that** the contract amount shown is for Skanska's work only. Be aware that the initial stage of the Hudson Bergen LRT, constructed as a DBOM, cost ~\$100MM/mile.
23. **Page 28, Jacobs, Hiawatha Corridor:** Jacobs was not the primary partner here.
24. **Page 29, Jacobs, Red Line:** This project is still in design phase.
25. **Page 36, 2<sup>nd</sup> Para.:** If the Proposer obtains a fixed revenue base, the primary funding risk after revenue service date would devolve to HRT and its jurisdictional stakeholders.

26. **Page 39, 1<sup>st</sup> Para.:** The Proposal assumes an aerial station at Town Center, which has been discussed in the VBTES study. However, there is a problem with placing this elevated station so close to the DVP transmission line that has not been addressed in this proposal. Much care and cost mitigation will be needed to prevent electrical induced voltage between the station facilities, catenary wires, and DVP transmission wires.
27. **Page 40, 1<sup>st</sup> Para.(Project Components):** These assumptions must be evaluated in more detail. The VBTES is examining the benefits/disbenefits of single pier structures versus driven pile structures. The structure decks for Norfolk LRT are open deck and were the least expensive option available. Planning for station shelter design is not standardized in VBTES's concept of the work. The city staff has expressed a desire for unique station appearances at some key LRT stations such as the Town Center station. This statement would also retain wayside signals, with no upgrades to Automatic Train Protection (ATP). HRT would advocate that ATP is warranted as the line is extended.
28. **Page 41, 3<sup>rd</sup> Para.:** The reconstruction of the Newtown Road Station to a two-track configuration should retain the crossover switch prior to the station. The nearest emergency crossover tracks are at Ingleside, elimination of this crossover is not recommended. The proposal is silent on this matter.
29. **Page 42, 1<sup>st</sup> and 3<sup>rd</sup> Para.:** Please note that ROW acquisition risk is assigned to HRT. This is also cited on page 70 as well. This is appropriate only for a Federal/FTA project. Note that HRT has no power of eminent domain; this was left to the City of Norfolk in previous work. In a PPEA, the question to ask is who would have the power for property takes?
30. **Page 42, Last Para.:** The fixed cost in this case does not necessarily assign risk to the Proposer. If it is indexed, it is almost a risk-adverse strategy. Also, the Proposer does not address capital replacement issues. At the end of the 27 year concession, the track, open deck bridge timbers, station shelters, vehicles, and facilities would be at the projected end of useful service life. Elevator maintenance and capital expense issues are not covered in the discussion at all.
31. **Page 43, Life Cycle Cost:** It is unclear if the claims made on page 43 are accurate or in accordance with other statements made elsewhere in the proposal.
32. **Page 43, Last Para.:** This proposal does not anticipate a siding track near the end-of-line station near Rosemont for maximum flexibility for operations. The VBTES study incorporates this feature. The Proposer's scope also does not appear to address vehicle commissioning either. This is an important feature not to overlook prior to "accepting" the rail vehicles from the manufacturer.
33. **Page 44, Last Para.:** Automatic Train Control is proposed at additional cost. This is different than Automatic Train Protection (ATP), which may be a Federal mandated requirement in the relatively near future. ATP would require modification of both systems and vehicles.
34. **Page 45, Last Para.:** Maintenance agreement would have to cover capital replacement issues noted above.
35. **Page 46, HRT Responsibilities:** FTA has indicated that Environmental Impact Statement that is currently under preparation in the VBTES may have to be restarted if this, or any PPEA proposal is accepted. They believe the entire Purpose and Need and analysis would change based upon the extension of Light Rail to the Rosemont vicinity. This Proposer suggests that the City of Virginia Beach and HRT submit a future application for a New Starts project to the Oceanfront utilizing the investment by Virginia Beach under the PPEA to satisfy a percentage of the eventual cost of a light rail alignment to the Oceanfront. Furthermore, ANY infrastructure bought with "local" funds (non - federal dollars), ie, track, rail cars, catenary wires, traction power substations, etc., does NOT provide a default waiver for Buy America with respect to any future procurement that uses federal money. Also, if the City of Virginia Beach, intends to apply, through HRT, for federal CMAQ funding for operating assistance during the first three years of operation, please note that in order to be eligible



for CMAQ funding, the project needs to complete all NEPA requirements and meet basic eligibility requirements under Title 23 and 49 of the U.S. Code, including federal third party procurement requirements and real estate acquisition requirements.

36. **Page 47, Permitting:** This is only a very preliminary and cursory list of permit requirements. The Cities of Norfolk and Virginia Beach each have their own requirements, as well as the Commonwealth.
37. **Page 48, Traffic:** The aerial crossings of Witchduck Road and Independence Blvd. involve relatively major traffic impacts. The Proposal only mentions this in passing without any level of detail of potential project risk. For example, the VBTES shows the structures over Witchduck and Independence as clear spans, which require special designs and construction.
38. **Page 53, Schedule:** Repeat of earlier comments (Page viii).
39. **Page 55, Operation /Maintenance:** If the Proposer takes over vehicle maintenance, and the Tide continues to operate out of the Norfolk Tide Facility (NTF), the building will have two entities within its confines, without the Proposer having appropriate discussions with HRT.
40. **Page 54, Completion Risk:** The only real implication of a delay in completion is the delay in payment to the Proposer of what is essentially, in our opinion, a balloon loan.
41. **Page 54, Agreement Term:** The maintenance agreement contains a minimum escalation clause in its indexing. Also, by the end of the 27 years, one or more light rail extensions are likely to be in operation, with any future extension expanding on items such as station platform (2 cars) and enhanced train signaling.
42. **Page 58, Design Codes:** It should be noted that Transportation Cooperative Research Project (TCRP) Report 57 (Track Design Handbook for Light Rail- 2000) and the Norfolk LRT Design Criteria are outdated and not really applicable for this Proposer to utilize. We support the Proposer using VDOT standards. The LRT Design Criteria Manual is currently under revision, and we would also additionally suggest the use of some version of the HRPDC standards, particularly for ancillary (e.g. park & ride) sitework and civil construction.
43. **Page 61, P3 Benefits:** It is clear that the stated advantages stated apply to toll roads, not so much to LRT construction.
44. **Page 63,** [REDACTED]
45. **Page 63,** [REDACTED]
46. **Page 63,** [REDACTED]
47. **Page 64,** [REDACTED]
48. **Page 64,** [REDACTED]

49. **Page 65,** [REDACTED]
50. **Page 67,** [REDACTED]
51. **Pages 68- 69,** [REDACTED]
52. **Page 70** [REDACTED]
53. **Page 70,** [REDACTED]
54. **Page 70,** [REDACTED]
55. **Page 71,** [REDACTED]
56. **Page 72,** [REDACTED]
57. **Page 73,** [REDACTED]
58. **Page 73,** [REDACTED]
59. **Page 76,** [REDACTED]
60. **Page 80,** [REDACTED] The quoted \$30MM (actually \$40MM) is for all preliminary costs through final design for both VBTES and Naval Station Norfolk (NSN) extensions. The Proposal implies that all of these funds are available for this Project work. Much of this funding is already committed and obligated to the VBTES and NSNTES.
61. **Page 87, Quality Management System Plan:** Note that there is an assumption that the Project will be an exact replica of the Norfolk LRT work. See Page 40 comments.
62. **Page 88, Audits:** The proposal suggests that only internal audits will be performed. This conflicts with financial transparency indicated elsewhere in the Proposal.
63. **Page 89, SWaM Qualifications:** Note that Federal project requirements do not recognize SWaM certified companies, only fully qualified DBE/WBE firms. This may be a problem when VB/HRT approaches FTA for future funding. The remainder of the section appears to be qualitative promises of participation.
64. **Additional Operation Concerns:** - While these comments are not reflective of a particular page the city should consult with HRT regarding these rail operation matters:

- a. Any proposal should assume that Train Control Systems will have positive enforcement of signals and/or Cab signaling. This should include the modification of the existing LRV fleet and starting line from NSU to Newtown.
- b. All stations should be designed to include two car platforms as the Tide project did.
- c. Service road access to all LRT equipment cases and houses should be part of the construction plans.
- d. Communications systems should include fiber optic cable extended to Rosemount. Stations should include variable message signs, security cameras on platforms and Public Address systems. Stations should include security camera system that is compatible with existing station camera system.
- e. Widening of area under I-264 bridge at Greenwich Road should accommodate Gaston water line and double track light rail.
- f. Install fully protected interlockings at Newtown and Rosemount Roads. Rosemount should include tail track of 250 ft beyond platform for both tracks.
- g. Ballasted track bridges should be one alternative to consider for flyovers.
- h. There should not be an assumption that 1MW Traction Power Substations (TPSS) will be sufficient. A traction power report identifying proper power consumption for two car trains at maximum headways and return rail voltage drop will determine TPSS size. TPSS should provide 4 feeder breakers (2 east, 2west)
- i. All Overhead Catenary System should be “constant tension.” Weight stacks to be located external of poles. Disconnect switches should be placed at all interlockings to accommodate power isolation per track interlocking to interlocking
- j. Dominion Power overhead transmission power lines with 250KV need to be considered in the design. TPSS need to be able to bleed off any AC induced voltage. Induced voltage mitigation equipment needs to be installed between section insulators in the OCS.
- k. Crossing gate design at roadway grade crossing should be designed so that gate length does not encroach on overhead DVP power lines or other utilities. Articulated gates should not be part of the design.

**End of HRT comments**